

連立方程式 (いろいろな連立方程式)

組 番 名前

1 次の連立方程式を解きなさい。

$$\textcircled{1} \begin{cases} x + 2y = 7 \\ x = 1 + y \end{cases}$$

$$\begin{aligned} 1 + y + 2y &= 7 \\ 3y &= 6 \\ y &= 2 \\ x &= 3 \end{aligned} \quad \underline{x = 3, y = 2}$$

$$\textcircled{2} \begin{cases} y = 2x - 11 \\ 5x + 2y = 5 \end{cases}$$

$$\begin{aligned} 5x + 2(2x - 11) &= 5 \\ 5x + 4x - 22 &= 5 \\ 9x &= 27 \\ x &= 3 \\ y &= -5 \end{aligned} \quad \underline{x = 3, y = -5}$$

$$\textcircled{3} \begin{cases} 5x - 3y = 14 \\ y = 2x - 5 \end{cases}$$

$$\begin{aligned} 5x - 3(2x - 5) &= 14 \\ 5x - 6x + 15 &= 14 \\ -x &= -1 \\ x &= 1 \\ y &= -3 \end{aligned} \quad \underline{x = 1, y = -3}$$

$$\textcircled{4} \begin{cases} 5y = 29 - 3x \\ 2x - 5y = -14 \end{cases}$$

$$\begin{aligned} 2x - (29 - 3x) &= -14 \\ 2x - 29 + 3x &= -14 \\ 5x &= 15 \\ x &= 3 \\ y &= 4 \end{aligned} \quad \underline{x = 3, y = 4}$$

$$\textcircled{5} \begin{cases} x = 2y + 5 \\ y = x - 3 \end{cases}$$

$$\begin{aligned} y &= 2y + 5 - 3 \\ -y &= 2 \\ y &= -2 \\ x &= 1 \end{aligned} \quad \underline{x = 1, y = -2}$$

$$\textcircled{5} \begin{cases} 4x + y = 1 \\ 3x - 2(2x - y) = -16 \end{cases}$$

$$\begin{aligned} y &= -4x + 1 \\ 3x - 2(2x - 4x + 1) &= -16 \\ 3x - 4x + 8 &= -16 \\ -x &= -18 \\ x &= 18 \\ y &= -71 \end{aligned} \quad \underline{x = 18, y = -71}$$

$$\textcircled{6} \begin{cases} 2(x + y) - 7 = x - 8 \\ 2x - y - 3 = 0 \end{cases}$$

$$\begin{aligned} x &= -2y - 1 \\ 2(-2y - 1) - y - 3 &= 0 \\ -4y - 2 - y - 3 &= 0 \\ -5y &= 5 \\ y &= -1 \\ x &= 1 \end{aligned} \quad \underline{x = 1, y = -1}$$

$$\textcircled{7} \begin{cases} \frac{x}{8} + \frac{y}{6} = \frac{3}{2} \\ x + 2 = y \end{cases}$$

$$\begin{aligned} 3x + 4y &= 36 \\ 3x + 4(x + 2) &= 36 \\ 3x + 4x + 8 &= 36 \\ 7x &= 28 \\ x &= 4 \\ y &= 6 \end{aligned} \quad \underline{x = 4, y = 6}$$

2 次の連立方程式を解きなさい。

$$\textcircled{1} 4x + 3y = -x + y = 7$$

$$\begin{aligned} \begin{cases} 4x + 3y = 7 \\ -x + y = 7 \end{cases} \times 3 \\ -3x + 3y = 21 \\ \hline -) 4x + 3y = 7 \\ \hline -7x &= 14 \\ x &= -2 \\ y &= 5 \end{aligned} \quad \underline{x = -2, y = 5}$$

$$\textcircled{2} 3x - 2y = -x + y = 2$$

$$\begin{aligned} \begin{cases} 3x - 2y = 2 \\ -x + y = 2 \end{cases} \times 2 \\ -2x + 2y = 4 \\ \hline +) 3x - 2y = 2 \\ \hline x &= 6 \\ y &= 8 \end{aligned} \quad \underline{x = 6, y = 8}$$